Special Article

Guidelines for the Control of Perinatally Transmitted Human Immunodeficiency Virus Infection and Care of Infected Mothers, Infants and Children

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The transmission of the human immunodeficiency virus (HIV) from infected mothers to infants, either in utero or perinatally, has been well established.[1-10] Infection in these infants can be asymptomatic or cause a variety of clinical syndromes including the acquired immunodeficiency syndrome (AIDS).[11] It is not, however, conclusively known what proportion of infants exposed in utero or perinatally will become infected and in what proportion of infected infants clinical disease will develop.[12] As of December 1, 1985, there were 217 cases of pediatric AIDS reported to the Centers for Disease Control (CDC) (unpublished data). Of these children, 48% were born to intravenous-drug-using mothers, 17% to Haitians and 10% to mothers who either had AIDS or were sexual partners of men with AIDS or at risk for AIDS. An additional 39 (18%) children were infected through transfusions of infected blood or blood products, and 13 (6%) had unknown sources of infection. Thus, 165 (76%) of the cases had been exposed to HIV in utero or perinatally.

HIV Infection in Women of Child-Bearing Age

In the United States, approximately 7% of adult cases of AIDS are women. Nearly 53% of these women are intravenous drug users, 15% are sexual partners of men in risk groups (primarily heterosexual intravenous drug users) and 9% have received infected blood or blood products. In all, 80% are between 20 and 49 years old, 22% of these women are white, 55% black and 23% Latino (CDC, unpublished data). In San Francisco, as of January 31, 1986, there had been ten cases of AIDS reported in adult women. Three of these women were intravenous drug users, one was a sexual partner of a man in a high-prevalence group, four had received transfusions and two had no identified risk. Four were between 20 and 49 years old; two of these were white, one black and one Asian.

HIV Transmission in Households

None of the identified cases of HIV infection in the United States are known to have been transmitted in school, day-care or foster-care settings or through casual person-to-person contact.[13] Other than sexual partners of HIV-infected patients, infants born to infected mothers or a single case involving nosocomial transmission from a child to a mother providing nursing care,[14] none of the family members of the more than 17,000 AIDS patients reported to CDC have had the development of AIDS. Five studies of family members of patients with HIV infection have failed to show HIV transmission to adults who are not sexual contacts of the infected patients or to children who are not already infected perinatally.[15-19] If, however, casual person-to-person transmission of HIV infection does exist, it should theoretically be greatest among young children. This theoretic transmission would most likely involve exposure of open skin lesions of mucous membranes to blood and possibly other body fluids of an infected person. We emphasize that there is no evidence of this type of transmission occurring in any setting at this time.

General Recommendations

Education

Risk-reducing education. All sexually active homosexual, bisexual and heterosexual adults with multiple sexual partners since 1979 should be aware that they are potentially at risk of HIV infection, and sexually active women with multiple sexual partners since 1979 should understand that, if they have been infected, they are at risk of transmitting HIV perinatally. To this end, widespread health education campaigns should address the risk of infection and the ways to prevent sexual transmission among heterosexuals and, more specifically, to women of child-bearing age. Additionally, women in recognized risk groups (Table 1) should be the target of more intensified educational campaigns and, if indicated, special educational programs to decrease their ongoing risk of parenterally or sexually acquiring HIV infection, such as referral for substance abuse or sexual risk-reducing counseling. These campaigns should be culturally and linguistically appropriate for these risk groups.

Provider education. To provide a high standard of care for HIV-infected women, infants and children, obstetricians, pediatricians, foster parents and agencies and other providers

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ABBREVIATIONS USED IN TEXT

AIDS = acquired immunodeficiency syndrome
ARC = AIDS-related complex
CDC = Centers for Disease Control
ELISA = enzyme-linked immunosorbent assay
HIV = human immunodeficiency virus

need to be educated about the virus, its modes of transmission, its prevention and the special issues of confidentiality and counseling surrounding the infection. Focus should be placed on educating and training those providers serving patients at highest risk of infection. We recommend that providers assess each patient's history of potential exposure to HIV and not assume that membership in a risk group implies de facto infection and, conversely, that nonmembership implies noninfection.

Laboratory Testing

We recommend that more than one method of anti-HIV antibody determination be used for testing pregnant women, women in risk groups and children of women in risk groups for HIV infection. Such methods include enzyme-linked immunosorbent assay (ELISA), indirect fluorescent antibody and Western blot. Because of a possible increased incidence of false-positive ELISA results during pregnancy, especially among intravenous-drug-using women, laboratory testing should be done in a single reliable and experienced facility. Submission of specimens identified only by code number to this laboratory will greatly decrease the chances of unintentional disclosure.

Preconception Recommendations

Whenever possible, women infected with HIV should be confidentially identified and educated about the risks of perinatal transmission. Infected women should be advised to postpone pregnancy until more is known about the specific risks of perinatal transmission. Detailed contraceptive counseling should be offered to these women. Infected women should also be counseled to avoid unsafe sexual practices and to inform previous and prospective sexual partners about their possible exposure. Regardless of other contraceptive methods used, they should use barrier methods of contraception—such as a condom or a condom plus a diaphragm with a nonoxynol-9-containing spermicide—during intercourse to diminish the chances both of transmitting HIV to their sexual partners and of being reinfected with it.

We recommend that women who believe themselves to be at high risk for HIV infection (Table 1) be confidentially or anonymously tested for anti-HIV antibody if they are planning to become pregnant. Testing can be offered through private physicians, alternate test sites or through clinics, especially those used by women in risk groups, such as family planning clinics, drug treatment programs and sexually transmitted disease clinics. Testing of these women, although strongly recommended, must be voluntary and confidential. We do not recommend that women who are not in risk groups be tested at this time. Because of possible sexual contact with men in high-incidence groups, however, it may be prudent for women with multiple sexual partners in areas with a high incidence of AIDS to consider themselves at risk and to obtain preconception counseling and testing if indicated. Regardless of test results, women and their children should continue to have access to all health and social services for which they are eligible.

TABLE 1.—*Women in Whom Human Immunodeficiency Virus Infection Has Been Reported*

Mode of Transmission	*Group*
Sexual	Sexual contacts of AIDS patients or men in risk groups*
	Artificially inseminated women (donor insemination) between January 1, 1979, and June 1, 1985
Parenteral	Intravenous drug users
	Recipients of blood or blood products between January 1, 1979, and June 1, 1985
Either	Mothers of perinatally infected children

AIDS=acquired immunodeficiency virus

*Women with multiple sexual partners in areas with high incidences of AIDS should possibly consider themselves in this category.

Recommendations for Mothers

Identification of Infected Pregnant Women

Routine histories taken at clinical facilities serving women potentially at high risk for HIV infection should include confidential questions designed to elucidate their risk of infection. Such clinics include physicians' offices, family planning clinics, sexually transmitted disease clinics, drug treatment clinics, women, infants and children clinics and prenatal clinics. Written or audiovisual materials, or both, regarding HIV infection should be available at all sites where these women are seen.

We recommend that women in risk groups be educated about HIV infection and that women determined to be at risk be tested at the time they present for prenatal care. Such testing must be voluntary and confidential. We do not recommend routine testing of all pregnant women. High-risk women who are seronegative in the first or second trimester should be retested in the late third trimester to rule out intercurrent HIV infection. Because quality obstetric care requires that the obstetrical provider know if an individual patient is infected, we recommend that, whenever possible, the test be obtained through the provider. Before such testing occurs, however, each provider should institute procedures that guarantee patient confidentiality. A release-of-information form authorizing the newborn's medical provider access to the mother's test result should also be obtained at this time. Because of the unique potential for exposure of health care workers to large amounts of possibly infectious blood and amniotic fluid during the course of labor and delivery, we recommend that labor and delivery personnel be notified of the need for appropriate infection control procedures on a strictly controlled basis. Ideally this information should be transmitted directly to labor and delivery personnel and through a mechanism other than the permanent medical record.

Care of Infected Pregnant Women

These recommendations apply specifically to women who are known to be infected. Guidelines for women at high risk of infection who have not been tested for HIV infection are found under "Special Considerations" below.

Prenatal care. We recommend that any seropositive woman be retested using two different anti-HIV antibody determinations to ensure accuracy. We recommend that women confirmed to be seropositive be carefully counseled regarding the risk of perinatal HIV infection and the options open to

them. Such options include continuing the pregnancy or terminating it if early enough in gestation. Infected women should also be specifically counseled to postpone subsequent pregnancies until more is known about the perinatal transmission of the virus. They should be medically evaluated to rule out any incipient opportunistic infection or malignancy. Specifically, the possibility of infection with *Mycobacterium tuberculosis* should be evaluated by chest x-ray film and purified protein-derivative test, and chronic infection with hepatitis B virus, cytomegalovirus and herpes simplex virus should be excluded. The use of teratogenic drugs, including trimethoprim and most antivirals, should be avoided except in the face of a life-threatening maternal illness.

Intrapartum care. We recommend that hospitals review their procedures for infection control during the intrapartum period and that hospital personnel exercise caution when dealing with any potentially infectious body fluid. For HIV these fluids include blood of either maternal or fetal origin, amniotic fluid and the placenta and membranes. Grossly contaminated linens and disposables, as well as blood and amniotic fluid specimens, should be handled according to the hospital infection control procedures. The choice of location for delivery—delivery room versus labor room—may be dictated by circumstance, but consideration should be given to a labor room delivery to minimize the need for disinfection of two locations. All personnel expected to have direct contact with an infected mother or newborn during delivery should wear gloves and gowns. Those exposed to the possibility of a splash of infectious materials should strongly consider wearing a mask and protective eyewear during the delivery itself. Disposal of all materials should follow hospital infection control procedures. The labor room, delivery room and all instruments should be disinfected with a 1:10 sodium hypochlorite solution. The placenta of a seropositive woman or of a high-risk woman of unknown status should be labeled with "Blood Precautions" or the equivalent before routing for pathologic examination or disposal.

Postpartum care. In the postpartum period, regular hospital infection control procedures for HIV infection should be followed. Isolation of asymptomatic seropositive women is not recommended. Mothers should be given full access to their infants unless they have untreated pulmonary tuberculosis. Until more is known about the possible transmission of virus in breast milk, mothers known to be infected should not breast-feed their infants. Because the potential for exposure to large amounts of infectious material decreases substantially after delivery, information regarding the woman's antibody status should not be transmitted beyond the labor and delivery area, including to social work, law enforcement or correctional personnel.

Special Considerations

Women at high risk of infection who are not tested. We recommend that women at high risk of HIV infection who have not been tested during pregnancy be presumed to be positive for purposes of intrapartum infection control procedures. As the benefits of breast-feeding may outweigh the possible risk of postnatal transmission of the virus, however, breast-feeding by mothers at risk of infection who have not been tested is not absolutely contraindicated. Rather, recommendations regarding the safety of breast-feeding should be individualized and based on a mother's estimated risk of infection.

Intravenous-drug-using mothers. To prevent further parenteral transmission of HIV through needle sharing and further perinatal transmission, we recommend that women in this group be specially targeted for substance abuse treatment and risk-reducing education.

Recommendations for Infants and Children

Identifying Exposed Infants

We recommend that identification of HIV-exposed infants begin in utero. If women in high-incidence groups are not tested during pregnancy, we recommend that for medical reasons their infants be tested as early as possible—such as testing the cord blood—and definitely before 2 months of age. Such testing should be done confidentially and with the voluntary consent of the child's parent or guardian.

Identifying Infected Infants

Infants of seropositive mothers. Infants born to mothers who are known to have been infected during pregnancy should be retested for anti-HIV antibody at about 1 year of age when passively acquired maternal antibody has disappeared. Infants presenting before 1 year of age with symptoms suggestive of HIV infection should be retested at that time. If facilities are available, peripheral mononuclear cells should be cultured for HIV to definitely establish a diagnosis of HIV infection.

Infants and children of high-risk mothers with unknown serologic status. Infants born to mothers at high risk of HIV infection whose prenatal anti-HIV antibody status is not known should be tested before 2 months of age for exposure to HIV and retested at 1 year of age or earlier if clinically indicated. Older children who were born on or after January 1, 1979, and whose mothers were at risk of HIV infection should be tested only if they have not completed a primary series of oral polio vaccine and have not received a measles-mumps-rubella vaccination or if clinically indicated. Because of possible complications of live virus vaccines, we recommend that older high-risk children be tested for HIV exposure or infection before receiving live virus vaccines. In the event that the parent or guardian refuses testing, the infant or child should not receive live virus vaccines.

Infants and children at risk for parenterally acquired infection. Infants and children at risk for parenterally acquired HIV infection should be tested only if they received blood or blood products from a donor identified as HIV-infected and will receive live virus vaccines, or if they were transfused with non-heat-treated factor VIII and will receive live virus vaccines or if clinically indicated.

Infants and children of non-high-risk mothers. Infants and children born to mothers not at high risk of HIV infection and not at risk for parenterally acquired HIV infection should not be tested.

Care of Exposed and Infected Infants and Children

Nursery and in-hospital care. Regular hospital infection control procedures for HIV infection and regular hospital procedures for inpatient care of immunosuppressed patients should be followed in the nursery and during subsequent inpatient admissions. To prevent possible portals of entry for infection, circumcision of exposed male infants should be strongly discouraged and only done with informed consent. Umbilical stumps should be meticulously cleaned daily until they are evulsed.

Routine home care. Care-givers who are exposed to the body fluids and excrement of exposed infants and infected children should be aware of the potential for infection and the modes of HIV transmission. Good handwashing after exposure to body fluids and excrement should be observed and any open lesions, either on care-givers' hands or on children, should be covered.

Medical care. Exposed infants who remain anti-HIV positive beyond 1 year of age or who have documented positive HIV cultures at any age should be considered at risk for the development of AIDS or AIDS-related complex (ARC) and, therefore, potentially immunodeficient. Infants and children either at risk for the development of AIDS or ARC or who have clinical AIDS or ARC should be assumed to have a secondary combined immunodeficiency, be followed closely for problems with growth and development and be given prompt and aggressive therapy for infections and exposure to potentially lethal infections, such as varicella and measles.

Exposed infants and infected children should not receive live virus vaccines or bacille Calmette Guérin until more is known about vaccinating HIV-infected persons. Inactivated vaccines, including *Hemophilus influenzae* type b and pertussis vaccines and diphtheria and tetanus toxoids, are not contraindicated and should be given as regularly scheduled. Inactivated polio vaccine should be substituted for oral polio vaccine and be given in conjunction with diphtheria and tetanus toxoids and pertussis vaccine at 2, 4, 6 and 18 months and 4 to 6 years of age. Measles, mumps and rubella vaccine should not be administered to these children at the present time.

Infants or children with clinical AIDS or ARC should be evaluated and cared for as if they have combined immunodeficiency disease. Because these children potentially have a significant cellular immunodeficiency, all blood products should be irradiated to avoid graft-versus-host disease. Until more is known about the natural history of disease in infants who remain anti-HIV positive beyond 1 year of age, the immune status of these children should be sequentially evaluated with the consultation of a pediatrician experienced in the care of HIV-infected children. The increased risk of *Pneumocystis carinii* pneumonia in these children may be modified by the prophylactic use of trimethoprim-sulfamethoxazole. As these children do not make normal specific antibodies to new antigens, their increased risk of infection with bacterial agents may be altered by monthly administration of immune globulin, either intramuscularly or intravenously.

Special Considerations

Foster care. In each decision involving foster-care placement, a mother's history of possible exposure to HIV infection should be individually assessed to determine if she and her child are truly at risk of infection. In San Francisco these decisions can be made in consultation with a designated perinatal coordinator within the Department of Public Health or, if necessary, with the Perinatal and Pediatric AIDS Advisory Committee. For the purposes of foster-care decisions, the committee in San Francisco also includes consumer advocates representative of ethnic and socioeconomic populations at high risk for perinatally transmitted infection. (For a list of the committee members, see footnote at end of article.)

If a child whose mother has been tested for HIV infection comes to foster care, we recommend that the social worker assigned to the case request that the mother's obstetrical provider release the results of her test to the perinatal coordinator with the mother's consent. Based on the results of these tests, the perinatal coordinator will specify if the infant will need medical foster-care placement or routine foster-care placement. Medical placement will be required for infants of mothers with a positive anti-HIV antibody test and in San Francisco entails review of the placement decision by the Perinatal and Pediatric AIDS Advisory Committee. Routine placement will require that a mother be seronegative. The perinatal coordinator will inform the social worker assigned to follow the child of the reasons for medical placement and will also be responsible, in conjunction with the social worker, for informing the foster family and the child's pediatrician of the reasons for medical placement. Additional authorizations to release information will be required for each of these subsequent disclosures.

Children younger than 3 years currently in foster care and children entering foster care in the future whose mothers were not tested for HIV infection prenatally should be tested for HIV infection only if their mothers have been determined to be at risk of infection. Testing in these cases is indicated on medical grounds alone and should be done with the consent of the mother. In San Francisco, if a mother refuses to consent to testing or refuses to release the results of her test, we recommend that the case be reviewed by the Perinatal and Pediatric AIDS Advisory Committee and, if indicated, confidential testing of the child and release of the test results be done as part of dependency proceedings. Once results of the test are available, they will be released by the child's provider to the perinatal coordinator in the case of voluntary testing or reported directly by the laboratory to the perinatal coordinator in the case of court-ordered testing. The perinatal coordinator will then indicate whether the child is in need of medical placement or routine placement. If the child is in need of medical placement, the perinatal coordinator will follow procedures as outlined above. If, for whatever reason, the child is not tested, the mother's exposure history will be reviewed and appropriate placement recommended by the perinatal and pediatric AIDS advisory committee.

Children in foster care 3 years of age and older, born after January 1, 1979, and born to a mother determined to be at risk of HIV infection should be tested only if they have significant neurodevelopmental delay and lack control of their body secretions or display aggressive behavior, such as biting, or who have uncoverable, oozing lesions. Such testing should occur only after careful medical review by a perinatal and pediatric AIDS advisory committee to determine if such conditions truly increase the theoretic risk of casual HIV transmission. Again, the consent of the child's mother should be obtained for testing and release of information, or, if consent is not available, testing and release of information should be ordered by the court if indicated. We feel that all prenatal testing should be done on a voluntary basis and that the mother should freely consent both to being tested and to release the test results (required by law in California[20]) to assure better medical care of her children. In the event, however, that a mother determined to be at significant risk of infection has not been tested prenatally, refuses to be tested prenatally or refuses to consent to release the results of her prenatal test, as it is our opinion that testing of high-risk children for HIV infection is medically indicated, we recommend that, if these children are to be placed in foster homes, such testing be done and, if necessary, be specifically ordered by the court having

jurisdiction over the child. Before any court-ordered testing, however, the case must be reviewed by the Perinatal and Pediatric AIDS Advisory Committee to determine if testing is indeed indicated.

Adoption. We recommend that infants and children whose mothers were at high risk of HIV infection, who were born on or after January 1, 1979, and who have not been previously tested be tested for HIV infection before placement. We recommend that the HIV status of all children at high risk of infection be made available to adopting parents before final placement so that they can consider the possible social and psychological effects on their families.

Conclusions

The information and recommendations contained in this report were developed and compiled by the Perinatal and Pediatric AIDS Advisory Committee, a special task force of the Department of Public Health, City and County of San Francisco, which included representatives of the Departments of Obstetrics, Gynecology and Reproductive Sciences, Medicine and Pediatrics and the AIDS Activities Unit, San Francisco General Hospital; the Department of Pediatrics, University of California, San Francisco; the San Francisco Medical Society; the American Academy of Pediatrics; the San Francisco Gynecologic Society; the San Francisco AIDS Foundation; Bay Area Addiction Research and Treatment, Inc, and the Department of Social Services, the City Attorney's Office and the Superior Court of the City and County of San Francisco.*

These recommendations apply to all infants, children and women of child-bearing age known to be infected or at high risk of being infected with HIV. This includes persons with CDC-defined acquired immunodeficiency syndrome, persons with lesser clinical manifestations of HIV infection such as ARC and persons with asymptomatic HIV infection. They are intended to supplement previously published national guidelines for the foster care and adoption of HIV-infected children and for the prevention of perinatal HIV infection.

We reemphasize that these are interim guidelines that will need to be reviewed as more information becomes available on perinatal transmission, the natural history of HIV infection in pregnancy and childhood and household transmission and also as vaccine and definitive antiviral therapy become available. Finally, it should be clearly stated that all evidence suggests that there is no risk of casual transmission of HIV and that the primary intent of these guidelines is to assure appropriate medical care for infected pregnant women, infants and children.

*Members of the committee were Moses Grossman, MD, chair: Jeffery W. Amory; Arthur F. Back, DrPH; Paul E. Barnes; Martin C. Carr, MD; Wayne W. Clark, PhD: Daniel E. Collins, JD; Nancy G. Corser, RN, FNP; Dean F. Echenberg, MD, PhD; James R. Green, MD; Marty Jessup, RN, MS; Alan C. Johnson, MD; Ron Kletter, PhD; Craig M. McCabe, JD; Larry Meredith, PhD; Glenn Molyneaux, MD; Geraldine E. Oliva, MD, MPH; Ann O'Reilly, MSW; Nancy H. Rubin, MSW; George W. Rutherford, MD; Edwin S. Sarsfield, MSW; Janet Shalwitz, MD; Nancy S. Shaw, PhD; Florence M. Stroud, MSN, MPH; John R. Vera, MSW; Diane W. Wara, MD; Daniel H. Weinstein, LLB; David Werdegar, MD, MPH; Constance B. Wofsy, MD; Donald F. Wong, MD, and Mark M. Young, MA.

REFERENCES

1. CDC: Unexplained immunodeficiency and opportunistic infections in infants—New York, New Jersey, California. MMWR 1982; 31:665-667

2. Cowan MJ, Hellman D, Chudwin D, et al: Maternal transmission of acquired immune deficiency syndrome. Pediatrics 1984; 73:382-386

3. Joncas JH, Delage G, Chad Z, et al: Acquired (or congenital) immunodeficiency syndrome in infants born of Haitian mothers (Letter). N Engl J Med 1983; 308:842

4. Lapointe N, Michaud J, Pekovic D, et al: Transplacental transmission of HTLV-III virus (Letter). N Engl J Med 1985; 312:1325-1326

5. Oleske J, Minnefor A, Cooper R Jr, et al: Immune deficiency syndrome in children. JAMA 1983; 249:2345-2349

6. Rubenstein A, Sicklick M, Gupta A, et al: Acquired immunodeficiency with reversed T4/T8 ratios in infants born to promiscuous and drug-addicted mothers. JAMA 1983; 249:2350-2356

7. Scott GB, Buck BE, Leterman JG, et al: Acquired immunodeficiency syndrome in infants. N Engl J Med 1984; 310:76-81

8. Scott GB, Fischl MA, Klimas N, et al: Mothers of infants with acquired immunodeficiency syndrome (AIDS)—Evidence for both symptomatic and asymptomatic carriers. JAMA 1985; 253:363-366

9. Thomas PA, Jaffe HW, Spira TJ, et al: Unexplained immunodeficiency in children—Surveillance report. JAMA 1984; 252:639-644

10. Ziegler JB, Cooper DA, Johnson RO, et al: Postnatal transmission of AIDS-associated retrovirus from mother to infant. Lancet 1985; 1:896-898

11. Rogers MF: AIDS in children: A review of the clinical, epidemiologic and public health aspects. Pediatr Infect Dis 1985; 4:230-236

12. CDC: Recommendations for assisting in the prevention of perinatal transmission of human T-lymphotropic virus type III/lymphadenopathy-associated virus and acquired immunodeficiency syndrome. MMWR 1985; 34:721-726, 731-732

13. CDC: Education and foster care of children infected with human T-lymphotropic virus type III/lymphadenopathy-associated virus. MMWR 1985; 34:517-521

14. CDC: Apparent transmission of human T-lymphotropic virus type III/lymphadenopathy-associated virus from a child to a mother providing health care. MMWR 1986; 35:76-79

15. Fischl MA, Dickinson G, Scott G, et al: Evaluation of household contacts of adult patients with the acquired immunodeficiency syndrome (Poster). International Conference on Acquired Immunodeficiency Syndrome (AIDS), Atlanta, Georgia, April 16, 1985

16. Friedland GH, Saltzman BR, Rogers MF, et al: Lack of transmission of HTLV-III/LAV infection to household contacts of patients with AIDS or AIDS-related complex with oral candidiasis. N Engl J Med 1986; 314:344-349

17. Kaplan JE, Oleske JM, Getchell JP, et al: Evidence against transmission of human T-lymphotropic virus/lymphadenopathy-associated virus (HTLV-III/LAV) in families of children with the acquired immunodeficiency syndrome. Pediatr Infect Dis 1985; 4:468-471

18. Lewin EB, Zack R, Ayodele A: Communicability of AIDS in a foster care setting (Poster). International Conference on Acquired Immunodeficiency Syndrome (AIDS), Atlanta, Georgia, April 16, 1985

19. Thomas PA, Lubin K, Enlow RW, et al: Comparison of HTLV-III serology, T-cell levels, and general health status of children whose mothers have AIDS with children of healthy inner city mothers in New York (Poster). International Conference on Acquired Immunodeficiency Syndrome (AIDS), Atlanta, Georgia, April 16, 1985

20. California Health and Safety Code, 199.21 *et seq*